

**METHOD AND APPARATUS FOR MEASURING THE ACCELERATION  
OF AN ENGINE**

1    ABSTRACT OF THE DISCLOSURE

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3           An apparatus for measuring the acceleration of an  
4 engine for use in a race car for matching the engine  
5 to the car for a particular racetrack and includes an  
6 engine test stand having a base and an inertia shaft  
7 mounted thereto coupled to a gear box. The test stand  
8 includes an engine cart for mounting the engine  
9 thereto and positionable for coupling the engine to  
10 the gear box and has a plurality of selectively  
11 engageable inertia wheels attached thereto. The  
12 method includes mounting an engine to the engine cart  
13 and positioning the engine cart for alignment with the  
14 gear box coupling the engine to the gear box. The  
15 engine is then accelerated through a predetermined RPM  
16 range so that measurements of elapsed time at  
17 preselected RPMs can be determined and a selected load  
18 to simulate a racetrack length.